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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/678,511	10/03/2000	Elliot Omiya	MSFT-0231/160306.1	5346

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EXAMINER	
STEELMAN, MARY J	

ART UNIT	PAPER NUMBER
2122	

DATE MAILED: 12/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/678,511	OMIYA ET AL.	
	Examiner	Art Unit	
	Mary J. Steelman	2122	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10/27/2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: *Copy of drawing.*

DETAILED ACTION

1. Claims 1-50 are pending.

Drawings

2. The objection to the drawings made in the former Office Action is hereby withdrawn.

Specification

3. The objection to the Specification made in the former Office Action is hereby withdrawn.

Claim Rejections - 35 USC § 101

3. The 35 USC 101 rejections made in the former Office Action are hereby withdrawn.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 50 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 50 recites "...the code module being selected based, at least in part,..." The phrase renders the claim indefinite.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. **Claims 1-4** are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 6,237,135 to Timbol.

Per claim 1:

-a base object having: internal logic executable on a computing device, said internal logic causing aid computing device to perform one or more actions, said one or more actions including the signifying of one or more events; and a public object model which includes identifiable references to said one or more events; and a customization object having: data or logic representative of said public object model; and an event handler which receives the signified events from said base object, and which invokes at least one customized code sequence based on said data or logic. (Timbol: Col. 4, lines 20-22, "...specify the name of the bean, the package it will be in, and the class (base object) it extends from." Col. 4, lines 25-26, "...choose a class to extend (from a base class)..." Col. 10, lines 17-20, "...once the user has created a "JAVA Bean"...can continue to use the BeansExpress...to make further changes to the generated component..." (further changes to the base object) Also, col. 9, lines 64-67, "The present invention provides a wizard-based tool which automatically generates code to define property setters and getters, accessor methods, event listener and registration mechanisms and the like." Also, col. 16, lines 59-67, "If the bean is registered with another component as a listener...the source component calls one of the methods in the listening component when that type of event occurs...Therefore, if the user wants the component to respond in some way (public object model which includes identifiable references to said one or more events) to such an event, the

user simply writes (customize) the code that responds within the body of the ...method..." (receive the signified events...and invoke at least one customized code sequence...))

Per claims 2: (Timbol, col. 6, lines 57-60, "...the client executes a "compiled"...program which has been created by compiling...source code...")

Per claims 3: (Timbol, col. 16, lines 23-25, "The user can also make the bean a listener for events that occur in other components...", col. 16, lines 64-67, "...if the user wants the component to respond in some way to such an event, the user simply writes the code that respond within the body of the KeyPressed() method...", col. 21, line 12, "...user event occurring in the IDE triggers the process.")

Per claim 4: (Timbol: Col. 15, line 58, "...adds the following three fire <event> methods...")

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. **Claims 5, 6, 8-10, and 13-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,237,135 to Timbol, in view of U.S. Patent 6,424,979 to Livingston et al.

Timbol disclosed a component based, application development system to included customizable objects. Timbol failed to disclose supporting information concerning the database and queries thereon. However, Livingston disclosed a remote server database for an enterprise. User queries are processed from customized components of the database through event handling.

Per claim 5: (Livingston: Abstract, lines 7-11, "The interface provides the user's selection of desired information within the portal in the form of a page request that is converted into queries of a database that seek content satisfying the type, level of detail and time frame attributes of the request." Also, col. 4, lines 23-25, "Each component is represented with varying levels of detail and multiple time frames allowing the view of the architecture to be customized based on user preferences.")

Therefore, it would have been obvious, to one of ordinary skill in the art, at the time of the invention, to have modified Timbol's component based application development system to included information on database storage / queries as disclosed by Livingston, because components are typically stored, accessed through databases, and manipulated in response to events (Timbol: col. 16, lines 23-67), in enterprise (Timbol: col. 20, line 7) systems.

Per claim 6: (Livingston: Col. 11, lines 50-67, "...generator compares the user's request (time dimension, level of detail, etc.) to the attributes stored in the XML tags that mark the tree's components, and only returns the information contained within tags whose attributes match the desired dimensions. The generator accomplishes this by using one or more queries...XML page generator sends out queries...")

Per claim 8: (Livingston: Col. 7, lines 52-55, "...the relational database also allows the EAM to store custom viewing preferences and configurations for each user of the architecture..." Also, col. 10, lines 55-60, "...user positions his...mouse...on an active link...and clicks...This action invokes ...hyperlink behavior...loads a new page...or activates a procedure through a script command assigned to the event handler...The system then retrieves...")

Per claim 9: (Livingston: Col. 6, lines 25-30, "Applications processing the XML data can then present a subset of those units by matching the attributes with the need expressed by the user...XML enables the logical assembly of the more detailed set of information." Also col. 12, lines 58-62, "Preferably, every section in the EAM has an owner and an expiration date. When a section reaches the expiration date, a notification agent initiates (executable action) the workflow by sending an e-mail reminder of the section owner.")

Per claim 10: (Livingston: Col. 11, line 67-col. 12, line 13, "XML page generator sends out queries requesting information...XML...queries the content database...The XML page generator receives the information it previously requested")

Per claim 13: (Timbol: Col. 7, lines 5-9, "...loader will unpack different sections of a file and instantiate in-memory corresponding data structures. The class loader will invoke itself recursively for loading any superclasses of the current class which is being unpacked.")

Per claim 14: (Timbol, col. 6, lines 57-60, "...the client executes a "compiled"...program which has been created by compiling...source code...")

Per claim 15: (Timbol: Col. 19, lines 16-17, "An Enterprise Java Bean is a non-visual bean that runs on a server." Also, Livingston: See fig. 1.)

Per claims 16: (Timbol: Col. 6, lines 24-25, "Software system which is stored in system memory and / or on disk storage...")

10. **Claims 7, 11, 12, 17-50** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,237,135 to Timbol, and in view of US Patent 6424979 to Livingston et al., and further in view of US Patent 6,654,029 to Chiu.

Timbol disclosed a component based, application development system to included customizable objects. Timbol failed to disclose supporting information concerning the database and queries thereon. Livingston discussed databases, however Chiu disclosed a remote network (col. 5, lines 40-42), "...functions provided are accessible from client stations over a computer network." User queries are processed from customized components of the database. Chiu disclosed information typical of naming conventions (moniker) used in object programming and database query retrievals. See col. 16, lines 39-45, "Different attributes...may be associated with an asset when stored in the Vault repository (database). Many tools derive and store much of this associated information automatically..." Col. 19, lines 23-24, "This architecture facilitates fast and efficient search and query capabilities." Col. 19, lines 34-40, "...assume that an attribute name 'Creator' having the type "String" has been predefined. Thus a search of the string metadata table is conducted until a set of matches is found...a list of assets, identified by the object-ids in the string metadata table is presented."

Therefore, it would have been obvious, to one of ordinary skill in the art, at the time of the invention, to have modified the invention of Timbol, to include database and query information as provided by Chiu, including information on the naming (moniker) conventions used for identifying customized modules because associating attributes with an object when stored is well known in the art and supplying meaningful names for objects or modules is a logical manner for storing and accessing data through queries.

Per claims 33, 40, 41 and 42: (Livingston, Col. 18, lines 10-55, "The first layer has a naming convention of...")

Per claims 40, 41 and 42: (Livingston: Fig. 1 and col. 9, lines 39-49, "...The request is provided to a web server which requests the needed information from an object server...")

Per claims 17, 27, 36 and 38:

Timbol disclosed a component based, application development system to included customizable objects. Timbol failed to disclose supporting information concerning the database and queries thereon. However, Chiu disclosed storing code in a database, retrieving code based on a query and executing code that satisfies the query. See Chiu, col. 2, lines 34-37, "The present invention provides an integrated platform for a variety of diverse computerized utilities and application programs that operate on and/or create various types of multimedia data." And lines 63-64, "Also provided is a means for modifying and/or adding extensions (further customize or derive from base object) to the plurality of utilities and services provided..." At col. 3, lines 1-7, "...provides services and utilities for indexing, storing, retrieving , searching, and generally managing and manipulating all of the multimedia data created or used...through the use of...data base management..." At lines 11-15, "services and utilities provided...can easily be modified and/or extended. Thus, a production studio simply attaches, in a "plug-and-play'(PNP) fashion, one or more supported DBMS..."

Therefore, it would have been obvious, to one of ordinary skill in the art, at the time of the invention, to have modified Timbol's invention of customizable objects to include the database functionality as disclosed by Chiu, because the 'plug and play' technique allows for an integrated efficient production environment for development. It is well known in the art. Database queries, retrieval and actions are well known in the art.

Regarding claims 7, 12, 20, 32, 44 and 50:

Timbol disclosed a component based, application development system to included customizable objects. Timbol failed to disclose supporting information concerning the database and queries thereon. However, Chiu disclosed storing code in a database, retrieving code based on a query and executing code that satisfies the query. Chiu disclosed the use of a query that is based on information derived from the environment in which software operates. At col. 10, lines 41-46, "...some tools may have browsing or searching capabilities...different program resources of the present invention will be utilized and thus different support code (for different environments) will be required." At col. 13, lines 40-44, "Querying involves describing the assets of interest...is formed by specifying the desired values for asset attributes (moniker string related to environment), including keywords. When the query is executed, a set of matching assets (objects) is returned.

Therefore, it would have been obvious, to one of ordinary skill in the art, at the time of the invention to have modified Timbol's invention for customized components to include database functionality as disclosed by Chiu because databases are a well known method for logically storing code, allowing for queries to search by providing a search string that is relevant to the object being searched.

Regarding claim 21,Timbol disclosed at Col. 21, lines 14-18, "This includes information about the collection of files, class path, class loader location, and the like, for the current project under development. This allows the wizard to determine...where a reference that occurs in a file may be located." Timbol failed to mention "pointers", however, Chiu disclosed the use of pointers

to locate code at col. 18, lines 9-12, "...assets contents may be stored outside of the Vault repository and a pointer (e.g., file name) to where the contents are located stored as an attribute..."

Therefore, it would have been obvious, to one of ordinary skill in the art, at the time of the invention to have included information regarding locating code with pointers as this is well known it the art, and thus inherent.

Per claims 22 – 24, and 28: (Timbol: Col. 4, lines 20-22, "...specify the name of the bean, the package it will be in, and the class (base object) it extends from." Col. 4, lines 25-26, "...choose a class to extend (from a base class)..." Col. 10, lines 17-20, "...once the user has created a "JAVA Bean"...can continue to use the BeansExpress...to make further changes to the generated component..." (further changes to the base object) Also, col. 9, lines 64-67, "The present invention provides a wizard-based tool which automatically generates code to define property setters and getters, accessor methods, event listener and registration mechanisms and the like."

Also, col. 16, lines 59-67, "If the bean is registered with another component as a listener...the source component calls one of the methods in the listening component when that type of event occurs...Therefore, if the user wants the component to respond in some way (public object model which includes identifiable references to said one or more events) to such an event, the user simply writes (customize) the code that responds within the body of the ...method..." (receive the signified events...and invoke at least one customized code sequence...))

Per claims 14 and 25: (Timbol, col. 6, lines 57-60, "...the client executes a "compiled"...program which has been created by compiling...source code...")

Per claims 15 and 26: (Timbol.: Col. 6, lines 24-25.)

Per claims 22, 27-29, and 30: (Timbol, col. 16, lines 23-25, "The user can also make the bean a listener for events that occur in other components...", col. 16, lines 64-67, "...if the user wants the component to respond in some way to such an event, the user simply writes the code that respond within the body of the KeyPressed() method...", col. 21, line 12, "...user event occurring in the IDE triggers the process.")

Per claim 34: (Livingston: Col. 11, lines 50-67, "...generator compares the user's request (time dimension, level of detail, etc.) to the attributes stored in the XML tags that mark the tree's components, and only returns the information contained within tags whose attributes match the desired dimensions. The generator accomplishes this by using one or more queries...XML page generator sends out queries...")

Per claims 35: (Timbol: Col. 19, lines 16-17, "An Enterprise Java Bean is a non-visual bean that runs on a server." Also, Livingston: See fig. 1.)

Per claim 37: (Timbol, col. 6, lines 57-60, "...the client executes a "compiled"...program which has been created by compiling...source code...")

11. ***Response to Arguments***

(A) Applicant has argued, in substance, the following: Timbol does not teach the use of both a base object and a customization object, does not teach that the base object includes a public object model that includes identifiable references to one or more events, and does not

teach that the customization object includes data or logic representative of the public object model.

Examiner' Response: Timbol does teach a "public object model", which is defined in the Specification as an interface with a set of events fired by application during execution and information necessary for customization to be able to interact. Timbol teaches design pattern specifying how components and their properties, methods and events created in the system must appear. Timbol allows for user input to add, remove, or modify (customize) selected properties, methods and events. See response to claims 1, 22-24, and 28 above. Additionally, see col. 10, lines 30-33, "a JAVA Bean is a public JAVA class that has a constructor with no parameters. JAVA Beans usually have properties, methods, and events that follow certain naming conventions (also known as "design patterns") and lines 57-59, "...user can choose a class to extend." At col. 14, line 5, "The user can customize how his or her bean appears..." At col. 14, lines 41-47, "If the super-class of the user's bean has a BeanInfo class and the user wants its BeanInfo data exposed (customization object includes data or logic representative of the public object model) ...code will now include a ...method that returns the BeanInfo data of the class the user's bean extends..." At col. 15, lines 12-14, "A JAVA Bean can generate (or fire) events, sending an event object to a listening object, and can listen for events (identifiable references to one or more events) and respond to them when they occur..." At col. 16, lines 24-25, "The user can also make the bean (customize) a listener for events..." and lines 59-67, "...if the user wants the component to respond in some way to such an event (reference to event) ...simply writes the code that responds within the body of the...method..." At col. 17, lines 7-8, "...user can create the custom event set..." At col. 20, lines 47-60, "...system may receive a user request for the

component to be a source for a new event (customize). This request is sent to the event engine. The engine...determines what type of event has been requested as well as what are the names of the corresponding functions...The custom event generator allows the user to create special events,...Using the custom event editor, the user is allowed to define a custom event." At col. 22, lines 17-19, "...superPropertyInfo holds property information (data or logic) from the superclass (base object) of the bean."

All other arguments are moot in view of the new grounds of rejection.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary Steelman, whose telephone number is (703) 305-4564. The examiner can normally be reached Monday through Thursday, from 7:00 A.M. to 5:30 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam can be reached on (703) 305-4552.

The fax phone number is (703) 872-9306 for regular communications and for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

MS

12/09/2003

TUAN DAM
SUPERVISORY PATENT EXAMINER